19. (NEW) A heat source or heat sink system with thermal ground coupling for near-surface recovery of thermal energy from the ground or for near-surface discharge of thermal energy into the ground, wherein the system comprises:

at least one ground probe arranged in the ground, wherein thermal energy can either be withdrawn from or discharged into the ground by means of a heat transfer fluid supplied through the ground probe,

wherein each ground probe comprises a metallic probe shaft that is tight against the surrounding ground and comprises several drive-pipe segments driven into the ground, and

wherein either an immersion pipe that is open at its lower end or a U-shaped pipe loop is arranged in the probe shaft for supplying or removing the heat transfer fluid,

wherein each drive-pipe segment is formed of ductile cast iron; and

wherein the drive-pipe segments are formed such that they can be fitted into each other at their ends,

wherein each drive-pipe segment comprises a tapered outer perimeter at one of its ends and, at its other end, a sleeve provided with a stop shoulder and having a mating tapered inner perimeter, wherein their diameters and taper angles are dimensioned such that the drive-pipe segments, on being driven in, can be connected to each other in a force-closed and tight manner, and

wherein a first advancing drive-pipe segment of the probe shaft is, at its forward end, has a probe tip.

20. (NEW) A system according to claim 1, wherein each tapered outer perimeter of each drive-pipe segment is provided at a forward end of said drive-pipe segment and wherein the sleeve of each drive-pipe segment that is designed with the stop shoulder is provided at a backward end of said drive-pipe segment.

21. (NEW) A system according to claim 19, wherein an outer diameter of the immersion pipe is smaller than an inner diameter of the probe shaft and that a length of the immersion pipe is slightly smaller than a length of the probe shaft.

22. (NEW) A system according to claim 19, wherein a length of the U-shaped pipe loop extending up to the latter's U-bend is slightly smaller than a length of the probe shaft wherein a part of an interior region of the probe shaft that is not occupied by the pipe loop is filled with a thermally conductive filling material.

23. (NEW) A system according to claim 19, wherein a last drive-pipe segment of the probe shaft is, at its backward end, tightly connected to a connection cover attached after completion of the drive-in procedure, with an inflow line connection and a return flow line connection for the heat transfer fluid being arranged on said connection cover.

24. (NEW) A system according to claim 23, wherein the immersion pipe or the pipe loop is solely mounted to or in the connection cover.

25. (NEW) A system according to claim 19, wherein the immersion pipe or the pipe loop comprises an air vent or a vent valve at its upper end.

26. (NEW) A system according to claim 19, wherein the immersion pipe or the pipe loop is formed of a plastic material.

27. (NEW) A system according to claim 19, wherein the probe shaft is driven into the ground either in vertical direction or in an inclined direction not exceeding 75° in relation to the vertical direction.

28. (NEW) A system according to claim 19, wherein the probe shaft is driven into a borehole that has been predrilled into the ground, with a maximum depth of the borehole being as great as a length of the probe shaft and with a diameter of the borehole being smaller than an outer diameter of the probe shaft.

29. (NEW) A system according to claim 19, wherein a wall thickness of each drive-pipe segment, with the exception of a region at either of its ends, ranges from 10 to 20 percent of an outer diameter of the drive-pipe segment.

30. (NEW) A system according to claim 19, wherein each drive-pipe segment, with the exception of a region at either of its ends, comprises an outer diameter approximately ranging from 80 to 200 mm and a wall thickness approximately ranging from 7 to 12 mm.

31. (NEW) A system according to claim 19, wherein a length of each drive-pipe segment approximately ranges from 4 to 6 m and wherein a total length of the probe shaft approximately ranges from 10 to 50 m.

32. (NEW) A system according to claim 19, wherein the heat transfer fluid is pure water under a pressure of an order approximately ranging up to 10 bar.

33. (NEW) A system according to claim 19, wherein the heat transfer fluid is carbon dioxide under a pressure of an order of at least approximately 100 bar.

34. (NEW) A system according to claim 19, wherein each drive-pipe segment is provided with an anticorrosive layer on at least one of its external and internal surfaces.

35. (NEW) A system according to claim 34, wherein the anticorrosive layer is formed by one of galvanizing and plastic coating.